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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,531

07/01/2005

Dirk Menzler

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PROSKAUER ROSE LLP
PATENT DEPARTMENT
1585 BROADWAY
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EXAMINER

FOGARTY, CAITLIN ANNE

ART UNIT

PAPER NUMBER

4116

MAIL DATE

DELIVERY MODE

10/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,531

Applicant(s)

MENZLER, DIRK

Examiner

Caitlin Fogarty

Art Unit

4116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/13/2004, 11/18/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

1. Claims 1 – 7 are pending and presented for the examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The two information disclosure statements (IDSs) were submitted on September 13, 2004 and November 18, 2005, respectively. These submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner. Please refer to applicants' copy of form PTO-1449 submitted herewith.

Oath/Declaration

4. The Oath or Declaration was filed on July 1, 2005, however it was not scanned in to the United States Patent and Trademark Office's electronic filing system. Therefore, please resubmit a copy of the oath or declaration so that it may be electronically filed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 5 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura et al. (EP 0 911 418 A1).

In regards to claim 1, page 2 lines 45 – 47, page 4 lines 41 – 45, page 8 lines 19 – 32, and Figures 8b and 9 of Kawamura et al. disclose a heat treatment device for conducting heat treatment on a steel strip by blowing a jet of gas in which the steel strip is heated, cooled, or dried by blowing the jet of gas onto the steel strip. The device has a nozzle bottom comprising nozzles where the nozzle bottom is arranged parallel to the plane surface and comprises apertures for the nozzles as seen in Figure 9. The nozzles are of tubular shape and a deflection device is arranged in them which provides spiral-shaped guidance to the gas and the nozzles are arranged perpendicular in relation to the surface to which heat is to be applied (see Figures 8b and 9).

Regarding claims 5 and 6, Figure 8b of Kawamura et al. teaches the device according to claim 1 wherein the deflection device is at least one metal strip which extends in spiral-shape on the axis of the nozzle along the entire length of the nozzle.

In regards to claim 7, page 8 lines 19 – 32 and Figure 9 of Kawamura et al. disclose the device according to claim 1 wherein the nozzles are arranged on the outflow side of the nozzle bottom

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al. (EP 0 911 418 A1) in view of Gellert (DE 3201710A).

In regards to claims 2 – 3, page 2 lines 45 – 47, page 4 lines 41 – 45, page 8 lines 19 – 32, and Figures 8b and 9 of Kawamura et al. teach the device according to claim 1 (see 102(b) rejection above) wherein each deflection device is made up of one or several metal strips which are evenly distributed around the circumference of the nozzle, and being spiral shaped within the nozzle.

Claims 2 and 3 differ from Kawamura et al. because Kawamura et al. do not teach that the width of the metal strips match the radius of the nozzle and in that the spiral-shaped arrangement in n metal strips extends over at least $360/n^\circ$ or that the deflection device comprises at least two flow channels of spiral-shaped arrangement.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kawamura et al. in view of Gellert because Gellert teaches a nozzle comprising a spiral-shaped metal strip wherein the width of said metal strip matches the radius of the nozzle (see Figure 1). Therefore, the spiral-shaped arrangement in n metal strips extends over at least $360/n^\circ$ and the deflection device comprises at least two flow channels of spiral-shaped arrangement.

One would have been motivated to make such modification because it is well known both nozzles are flow mediums and therefore gas can also flow through the nozzle disclosed in Gellert.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al. (EP 0 911 418 A1).

In regards to claim 4, page 2 lines 45 – 47, page 4 lines 41 – 45, page 8 lines 19 – 32, and Figures 8b and 9 of Kawamura et al. teach the device according to claim 1 (see 102(b) rejection above) wherein the nozzles are arranged to be equidistant on straight lines which are in a perpendicular position in relation to each other (see Figure 9).

Claim 4 differs from Kawamura et al. because Kawamura et al. do not specify that the spiral-shapes of the nozzles are arranged in opposite directions. Kawamura et al. do not disclose the direction of the spiral-shapes in the nozzles.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kawamura et al. by arranging the spiral-shapes of the nozzles in opposite directions. One would have been motivated to make such

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modification because it is well known in the art that the gas would flow differently through the nozzle based on the direction of the spiral. Therefore, in order to get the most coverage of heated gas on the workpiece, it is best arrange the spiral-shapes of the nozzles in opposite directions.

Conclusion

11. No claim is allowed.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caitlin Fogarty whose telephone number is 571-270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

VICKIE Y. KIM
SUPERVISORY PATENT EXAMINER



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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